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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,391	03/27/2001	Kunihiro Yamamoto	B588-017	2786

26272 7590 09/28/2006

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EXAMINER

NGUYEN, CINDY

ART UNIT PAPER NUMBER

2161

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/818,391

Applicant(s)

YAMAMOTO ET AL.

Examiner

Cindy Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08/04/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 7, 9-11, 15, 17, 19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 9-11, 15, 17, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/04/06 has been entered.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 17 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

To be statutory, a claimed computer-related process must either: (a) result in a physical transformation outside the computer for which a practical application is either disclosed in the specification or would have been known to a skilled artisan, or (b) be limited to a practical application with useful, concrete and tangible result.

The claim 17 is not statutory, directed to program, per se, the claimed is control program being executed just comprising the code of a feature calculation step, code of an acquisition step, code of a similarity calculating step, code of a retrieval step, the codes are not used to produce the useful and tangible result, whether their execution accomplishes a practical application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7, 9-11, 15, 17, 19 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over De Bonet (us 5899999) in view of Ikeda (US 5801773).

Regarding claims 1, 9 and 17, De Bonet discloses: An image retrieval apparatus implemented in a computer system for retrieving a desired image from a plurality of stored images (col. 6, line 1 to col. 7, lines 57, De Bonet), comprising:

storage means for storing the plurality of images and an image feature set of each of the plurality of images in a form correlated with the image (col. 13, lines 41 to col. 14, lines 60, De Bonet), wherein the image feature set of each image includes

image features of a predetermined number of tile images obtains by dividing an image into a predetermined number of tiles col. 13, lines 41 to col. 14, lines 60, De Bonet);

feature calculation means for dividing a retrieval source image into the predetermined number of tile images and obtaining an of image feature set of the retrieval source image by calculating an image feature of each of the tile images (col. 18, lines 20 to col. 19, lines 11, De Bonet);

Similarity calculating means calculating degree of similarity between each of the plurality of images (template image object and region of interesting of object) and the retrieval source image based on the plurality of image feature sets (color categories) acquired by the acquisition means and the image feature set calculated by the feature calculation means, wherein said similarity calculating means calculates degree of similarity between each image feature set of the plurality of image feature sets acquired by said acquisition means (col. 14, lines 1-26, De Bonet) and the image feature set calculated by said feature calculation means, and adopts maximum degree of similarity for each of the stored images (highest similarity images) as the degree of similarity between each of the stored images and the retrieval-source image (col. 14, lines 27-60, De Bonet); retrieval means for retrieving the desired image from the plurality of stored images based on the degrees of similarity between the plurality of stored image and the retrieval source image, calculated by said similarity calculating means (col. 14, lines 27-60, De Bonet).

However, De Bonet didn't disclose: acquisition means for generating plurality of image feature sets by multiplying an image feature included in an image feature set

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stored in said storage means, by a constant and acquiring plurality of image feature sets regarding one image by varying the constant. On the other hand, Ikeda discloses: acquisition means for generating plurality of image feature sets by multiplying an image feature included in an image feature set stored in said storage means, by a constant and acquiring plurality of image feature sets regarding one image by varying the constant (col. 18, lines 19-36, Ikeda). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include acquisition means for generating plurality of image feature sets by multiplying an image feature included in an image feature set stored in said storage means, by a constant and acquiring plurality of image feature sets regarding one image by varying the constant in the system of De Bonet as taught by Ikeda. The motivation being to enable the system process easily generates output image data from image data with an enlarged dynamic range in accordance with the dynamic range and enables flexible change of the dynamic range in accordance with a user's output purpose, thus outputs a high quality image data with a dynamic range larger than that of a standard image (col. 3, line 20-32).

Regarding claims 2 and 10, most of the limitations of these claims have been noted in the rejection of claims 1 and 9 above, respectively. In addition, De Bonet/Ikeda discloses: wherein said acquisition means generates N image feature sets by multiplying a luminance component of the image features that have been stored in said storage means by N constants (col. 18, lines 19-36, Ikeda).

Regarding claims 3 and 11, most of the limitations of these claims have been noted in the rejection of claims 1 and 9 above, respectively. In addition, De Bonet/Ikeda discloses: wherein said acquisition means generates N image feature sets by multiplying a color difference component of the image features that have been stored in said storage means by N constants (col. 18, lines 19-36, Ikeda).

Regarding claims 7 and 15, most of the limitations of these claims have been noted in the rejection of claims 1 and 9 above, respectively. In addition, De Bonet/Ikeda discloses: wherein said acquisition means has specifying means for allowing an operator to specify number of steps over which image features are varied as well as the amount of change provided by each step (col. 15, lines 5-38, De Bonet).

Regarding claims 19 and 20, De Bonet/Ikeda discloses: an image retrieval apparatus implemented in a computer system and method for retrieving a desired image from a plurality of stored images, comprising: input means for inputting a retrieval source image, the retrieval source image including color components (col. 13, lines 16-41, De Bonet); feature calculating means for obtaining an image feature set calculating image feature of each color component of the retrieval source image, respectively (col. 14, 1-60, De Bonet); selection means for selecting one image from a plurality of images stored in a database (col. 14, lines 27-60, De Bonet); reading means for reading an image feature set of the selected image (col. 14, lines 27-60, De Bonet); generation means for generating an image feature set by multiplying the set of image features of the retrieval source image or the set of image features of the selected image by a

variable (col. 18, lines 19-36, Ikeda); calculation means for calculating a set of degrees of similarity between the retrieval source image and the selected image, using the plurality of feature sets generated by said generation means (col. 14, lines 1-60, De Bonet); determination means for determining maximum degree of similarity for each of the stored images from the set of degrees of similarity as a degree of similarity between the retrieval source image and the selected image (col. 14, lines 1-60, De Bonet); retrieval means for retrieving the desired image by repeating process by said selection means, said reading means, said generation means and said determination means (col. 14, lines 27-60, De Bonet).

1. Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Normile et al. (U.S 5872864). Method and system for automatic classification of video images.

Foot et al. (U.S 6404925). Methods and apparatuses for segmenting an audio visual recording using image similarity searching and audio speaker recognition.

Abbel-Mottaleb et al. (U.S 6263113). Method for detecting a face in a digital image.

Abbel-Mottaleb et al. (U.S 5915038). Using index keys extracted from JPEG-compressed images from image retrieval.


Shiima (U.S 6400853). Image retrieval apparatus and method.

2. Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 571-272-4025. The examiner can normally be reached on M-F: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gaffin Jeffrey can be reached on 571-272-4146. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.


Cindy Nguyen
September 21, 2006


JEFFREY GAFFIN
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